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ABSTRACT

This paper reviews literature on job satisfaction and work adjustment and relates it to ways in which vocational education can contribute to worker satisfaction. The first section considers studies of job satisfaction from the beginning of the twentieth century and shows how the various approaches are not conflicting but contribute different and often complementary dimensions for understanding the nature and sources of job satisfaction. Measures of job satisfaction are also mentioned, and conclusions regarding job satisfaction research are drawn from the literature. The second section focuses on Lofquist and Dawis's Theory of Work Adjustment (work is the interaction between an individual and a work environment in which each has requirements of the other). In section 3 this theory is applied to vocational education programs and policies. A number of questions which should be addressed if job satisfaction is to be included as a desired outcome of vocational education are approached as they would be treated according to the Theory of Work Adjustment. The ways in which the theory could be put into effect in vocational education are detailed. (YLB)

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JOB SATISFACTION AND WORK ADJUSTMENT:
Implications for Vocational Education

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FOREWORD

Job Satisfaction and Work Adjustment: Implications for Vocational Education reviews the literature on job satisfaction and relates it to issues and concerns involved in education and training. A major focus is on the authors' Theory of Work Adjustment and its application to vocational education.

This is one of six interpretive papers produced during the third year of the National Center's knowledge transformation program. The review and synthesis in each topic area is intended to communicate knowledge and suggest applications. Papers in the series should be of interest to all vocational educators, including teachers, administrators, federal agency personnel, researchers, and the National Center staff.

The profession is indebted to Professors Rene V. Dawis and Lloyd H. Lofquist for their scholarship in preparing this paper. Recognition is due Dr. Dean Hummel, Virginia Polytechnic Institute and State University; Dr. Garry R. Walz, University of Michigan; and Dr. Robert Darcy, National Center for Research in Vocational Education, for their critical review of the manuscript. Staff on the project included Dr. Carol Kowle, Alta Moser, Shelley Grieve, and Raymond E. Harlan. Editorial assistance was provided by the Field Services Area.

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EXECUTIVE SUMMARY

Today, work is viewed not only in terms of the task requirements and skills necessary for productivity, but also in terms of the conditions that must be met if workers' values and needs are to be satisfied. Vocational training programs can and should be geared to promote the likelihood that competent workers will also be satisfied with their jobs. A review of research on job satisfaction and work adjustment provides a context for a discussion of the ways in which vocational education can contribute tc worker satisfaction. A major focus of this review is on the authors' Theory of Work Adjustment and its application to vocational education programs and policies. Measures of job satisfaction are mentioned, and conclusions regarding job satisfaction research are drawn from the literature.

INTRODUCTION

It is a truism in our society that one's occupation determines, in large part, one's way of life. The occupation will significantly influence such everyday matters as where we live, what we eat, how we bring up our children, how we dress, how we spend leisure time, how we are regarded socially, how we regard our own contribution to society, and how happy we are. In other words, occupation is a primary determiner of an individual's economic status, social status, self-identity, and overall life satisfaction.

The importance of both the preparation for and selection of an occupation have been recognized in education through the establishment of programs of vocational education and vocational guidance. These programs attend both to society's increasing need for vocational education as an important part of general education, and society's increasing concern for the worker as an individual.

The initial focus of vocational education programs was on developing competence in work skills, i.e., on training students to be satisfactory workers. This focus on training for satisfactory work performance characterized worker preparation at all levels. Only in recent years has the importance of the individual's degree of satisfaction with work been considered along with the quality or satisfactoriness of the work itself. Vocational guidance programs reflect this increased concern for worker satisfaction.

Today, work is viewed not only in terms of the work demands, task requirements, and skills necessary for productivity, but also in terms of the conditions that must be met if workers' values and needs are to be satisfied. In fact, actual vocational training programs can and should be geared to promote the likelihood that competent workers will also be satisfied with their jobs. A review of research on job satisfaction and work adjustment provides a context for a discussion of the ways in which vocational education can contribute to worker satisfaction.

JOB SATISFACTION: AN OVERVIEW OF THE LITERATURE

Studies of job satisfaction date back to the beginning of the twentieth century. Among the early studies were those by Levenstein, who surveyed the job satisfaction of German workers (1912; Hoppock 1935); Munsterberg (1913), who found that not all workers were dissatisfied with monotonous, repetitive jobs; Fryer (1926), who studied the relationship of job satisfaction to factors such as age, marital status, education, and religion and found no significant relationships in a sample of male applicants for commercial jobs; and Thorndike (1934), who reported low correlations between aptitude test scores and job satisfaction measured ten years later.

The first really comprehensive treatment of the topic was Hoppock's *Job Satisfaction* (1935). In his classic series of studies of job satisfaction, Hoppock observed that there were more satisfied workers than he had expected to find. For example, at least two thirds of all the workers he surveyed in the community of New Hope, Pennsylvania, were satisfied. This finding, however, may have been partially a function of the Depression period. Hoppock also found that higher job satisfaction for a group of teachers seemed to be associated with better mental health, better human relationships, more favorable family social status, age (older teachers were more satisfied), having religious beliefs, feelings of success, and working in a larger community. In the total community group, according to Hoppock, job satisfaction was related to sex (males were more satisfied), occupational level (workers were more satisfied as job level progressed from unskilled manual to professional, managerial, and executive), and age (older workers were more satisfied). Finally, he concluded that job satisfaction could be measured reliably. The split-half reliability index was .93 for his four-item job satisfaction scale. Hoppock's work stimulated interest both in surveys of the job satisfaction of occupational groups and in studies of correlates of job satisfaction. Annual summaries of these studies were initiated by Hoppock and continued by Robinson and others (see note page 12).

Perhaps the best known early research into job satisfaction is represented by the Hawthorne studies (Roethlisberger and Dickson 1939) conducted by Mayo and associates during the late 1920s and early 1930s. These studies have been credited with stimulating research into the causes of job satisfaction and dissatisfaction. While the studies have been criticized in recent years, the results were interpreted as demonstrating the need to change the focus in work from economic incentives, as exemplified in the work of Taylor (1911), to human relationships. Job satisfaction, as viewed in these studies, was determined more by the work group and the supervisor than by pay, fringe benefits, and physical working conditions.

More recent work has approached satisfaction from the point of view of individual motivation or "satisfiers" of individual needs. For example, Roe

stressed the role of occupation in the satisfaction of individual needs in the *The Psychology of Occupations* (1956). Roe, in turn, subscribed to Maslow's (1954) need theory of human motiviation. According to Roe, employment satisfies human needs at all levels of Maslow's hierarchy of needs, from the most basic physiological safety needs to the higher order need for self-actualization.

Maslow's theory also influenced Herzberg and his colleagues (Herzoerg, Mausner, and Snyderman I959), who advanced the two factor theory of job satisfaction. The Herzberg theory posits two sets of factors in the work setting: a set of motivators or satisfiers (such as work itself, achievement, promotion, recognition, and responsibility) related only to job satisfaction, and a second set called hygiene factors or dissatisfiers (such as supervision, interpersonal relations, working conditions, compensation, and company policies and practices) related only to job dissatisfaction. Herzberg's work stimulated much research on the components of job satisfaction, although recently researchers have questioned the division of these components into satisfiers and dissatisfiers (Friedlander 1964; Locke I976). The theory has, however, served as a basis for research in the area of job enrichment (Ford I969; Maher I97I).

Other research into the topic of work motivation includes Vroom's (1964) Valence-Instrumentality Expectancy Theory (VIE) adapted from Lewin (1951). While Vroom's theory focuses on performance and work behavior, it has significance for understanding job satisfaction. VIE theory proposes that satisfaction is the product of valence (value to the individual) of outcomes (such as income or high social status) and the perceived instrumentality (effectiveness) of the job in producing these outcomes. The theory predicts that a worker will be satisfied if the expected effectiveness of the job in producing a highly valued outcome is realized.

Other major theories or models of job satisfaction include those by Schaffer (I953), Katzell (1964), Adams (I965), Lofquist and Dawis (I969), and Locke (I976). Several of these researchers have advocated variants of a model that treats satisfaction and dissatisfaction as outcomes of the similiarity or difference between what is desired in terms of needs or values and what is experienced, or actual conditions. Billings (McKinney, Gray, and Abram 1978) further identifies three basic types of job satisfaction models: Lawler's model of component satisfaction; the person/environment fit model as represented by Dawis, Lofquist, and Weiss and Seybolt; and the met expectations model as represented by Porter and Steers and Wanous. Finally, Lawler has developed a model of the determinants of satisfaction with outcomes, which consolidates elements of various other models of the causes of job satisfaction (McKinney, Gray, and Abram 1978).

Schaffer (I953) was a pioneer in the study of the relation of need satisfaction to job satisfaction. According to Schaffer, in any situation, the amount of dissatisfaction generated is determined by the strength of the individual's needs or drives and the extent to which the individual can perceive and use opportunities in the situation to satisfy those needs.

Adams' (1965) Equity Theory, on the other hand, points out the importance of the process of making social comparisons in determining job satisfaction. This theory compares an individual's ratio of outcomes to inputs with that of another individual (or 'reference other'). If, for example, individuals perceive that their efforts are equivalent to those of another, but the other's outcomes are more favorable, then they may feel a sense of inequity or dissatisfaction. This theory has been applied primarily to studies of satisfaction with pay (Patchen 1961; Pritchard, Dunnette, and Jorgenson 1972).

Katzell (1964) regards dissatisfaction as the result of the discrepancy between the amount of a stimulus experienced and how that stimulus is valued. Value, according to Katzell, is the magnitude of a stimulus which evokes the most pleasurable effect.

Similarly, Locke (1976) considers that job satisfaction results from the perception that the job fulfills (or allows the fulfillment of) the individual's important job values, providing that the values are congruent with the individual's needs. Locke distinguishes between needs, or objective requirements for survival and well being, and values, or those things consciously or subconsciously desired, wanted, or sought. Locke points out that needs and values can be in conflict, despite the fact that the ultimate biological function of values is to direct actions and choices in order to satisfy needs.

Lofquist and Dawis (1969) view satisfaction as a function of the correspondence between the reinforcer system of the work environment and the individual's needs, provided that individual's abilities correspond with the ability requirements of the work environment. Satisfaction represents the workers' appraisal of the extent to which the work environment fulfills their requirements (Dawis, Lofquist, and Weiss 1968). This is the person/environment fit model as discussed by Billings (Gray, Abram, and McKinney 1978).

Lastly, the met expectations model represented by Smith, Kendall, and Hulin (1969), Wanous, and Porter and Steers and the model of component satisfaction represent somewhat different approaches to the subject of job satisfaction. According to the met expectations model, the prospective employee has a set of expectations about what the job should offer. When expectations are not met, dissatisfaction is the result.

Smith, Kendall, and Hulin (1969) view job satisfaction as resulting from the perception of the difference between what is expected as fair and reasonable return and what is experienced, in relation to the available alternatives. In Lawler's model of component satisfaction, various individual components or facets of the job are considered, as well as overall job satisfaction. Billings (Gray, Abram, and McKinney 1978) lists the most commonly used job components as follows: work itself, pay, promotion, recognition, working conditions, supervision, coworkers, and company policies. For each component of the job, the employees judge what they should be and are receiving, feel

satisfied or dissatisfied as a result, and combine their evaluation across all components to determine overall satisfaction.

Measures of Job Satisfaction

Several instruments have been developed for measuring job satisfaction. A number of the widely used measures are abstracted in Gray, Abram, and McKinney (1978). Some of the more common measures described in that publication are outlined below.

Hoppock's Job Satisfaction Blank is one of the best known and most widely used measures of job satisfaction. The instrument measures overall satisfaction based on four items. Each item presents the respondent with seven statements describing a continuum from extreme dissatisfaction to extreme satisfaction. Split-half reliability data are available, although no test-retest data were reported. Validity data have been gathered to a limited extent.

The Job Descriptive Index developed by Smith, Kendall, and Hulin is an indirect measure of satisfaction that consists of word or phrase descriptions of five job facets (work, supervision, pay, promotions, and coworkers). Reliability and validity data are available on this instrument.

The Minnesota Satisfaction Questionnaire developed by Weiss, Dawis, England, and Lofquist consists of 100 items designed to assess satisfaction with twenty aspects of the work environment (called reinforcers) that correspond to twenty psychological needs. Each item is rated on a Likert-type scale ranging from "not satisfied" to "extremely satisfied." Reliability and validity data are available. Validity has also been established by the study of differences in occupational groups and studies of the relationship between satisfaction and satisfactoriness as specified by the Theory of Work Adjustment.

The Measurement of Work-Relevant Attitudes by Walther is an instrument designed to differentiate between "good" and "poor" adjustment to work on the part of trainees in work training programs. A Likert-type scale is also used for responses on three subscales: optimism, self-confidence, and unsocialized attitudes. Test-retest reliability data and some validity data are reported. Kerr's Tear Ballot for Industry uses eleven components of job happiness and welfare to arrive at a job satisfaction score. Reliability and validity data are available; norms are available for more than 100 occupational samples.

Conclusions About Job Satisfaction

The various approaches to the study of job satisfaction should not be viewed as conflicting, but as contributing different, and often complementary

dimensions for understanding the nature and sources of job satisfaction.* For example, Maslow, Roe, Locke, Schaffer, Katzell, and Lofquist and Dawis all emphasize the importance of needs/values. Schaffer, Herzberg, Lofquist and Dawis, and Smith, Kendall, and Hulin identify comparable sets of needs related to job satisfaction. Herzberg calls attention to the difference between the dimensions of satisfaction and dissatisfaction. Vroom's use of valence appears consonant with the need/value approaches, and his expectancy concept is implicit in Adams' Equity Theory and in Lofquist and Dawis' definition of satisfaction.

Lastly, the met expectations model represented by Smith, Kendall, and Hulin (1969), Wanous, and Porter and Steers and the model of component satisfaction represent somewhat different approaches to the subject of job satisfaction. According to the met expectations model, the prospective employee has a set of expectations about what the job should offer. When expectations are not met, dissatisfaction is the result.

Research on job satisfaction has produced a number of important findings. These findings are summarized in the statements that follow.

1. While a majority of workers (approximately four-fifths) express overall satisfaction with their jobs, when workers are asked whether or not they would change jobs, given the opportunity, about one-half of them say that they would (Special Task Force to the Secretary of HEW 1973). From this, we infer that about 30 percent of workers are only minimally satisfied, and another 20 percent are dissatisfied.

2. Satisfaction with work is not assured by finding a job and being able to meet its requirements.

3. There are much larger individual differences in job satisfaction within groups classified for age, sex, education, and occupational level than there are differences in average satisfaction level among the groups themselves. For example, the Manual for the Minnesota Satisfaction Questionnaire (Weiss, et al. 1967) reports significantly different mean general-satisfaction scores for seven different occupational groups ranging in occupational level from assemblers and clerks to engineers and salesmen. These means ranged from a low of 67.47 to a high of 77.88, whereas the smallest standard deviation reported for any group was 11.51 or a range of over 50 points. These data suggest that the most meaningful approach to job satisfaction must attend to individual differences, rather than being limited to differences among groups.

*A number of more detailed summaries of job satisfaction research are available. For example, Hoppock and his colleagues reviewed job satisfaction research for selected time periods from 1938 to 1949 (Hand, Hoppock, and Zlatchin 1948; Hoppock and Hand 1945; Hoppock and Odom 1941; Hoppock and Robinson 1949, 1950; Hoppock, Robinson, and Zlatchin 1948; Hoppock and Shaffer 1943; Hoppock and Spiegler 1938). Robinson and his colleagues continued these reviews during 1951-1965 (Robinson 1953, 1954, 1955, 1956, 1957, 1958, 1959; Robinson and Connors, 1960, 1961, 1962, 1963; Robinson, Connors, and Robinson 1964; Robinson, Connors, and Whitacre 1966; and Robinson and Hoppock 1952). Other reviews of the literature on job satisfaction include those by Herzberg, Mausner, Peterson, and Capwell 1957; Locke 1976; Pallone, Hurley, and Rickard 1971; Smith, Kendall, and Hulin 1969; and Vroom 1964.

4. Levels of job satisfaction are correlated only slightly with measures of job performance (Brayfield and Crockett 1955). At the same time, levels of job dissatisfaction have been found to be related to job turnover, absenteeism, and tardiness (Brayfield and Crockett 1955; Porter and Steers 1973). While satisfaction does not guarantee performance, it does relate to tenure and other measures of job commitment. It is obvious that employee satisfaction is important to work organizations in terms of costs for recruitment, selection, and training of replacements, and losses due to interrupted production.

5. At least one study shows that job satisfaction is a good predictor of longevity (Palmore 1969). Job satisfaction has also been correlated with other indices of physical and mental health (Special Task Force to the Secretary of HEW 1973).

THEORY OF WORK ADJUSTMENT

The factors contributing to job satisfaction or dissatisfaction are closely related to the concept of work adjustment, which is defined as the mutual responsiveness of the worker and the work environment to each other's requirements (Lofquist and Dawis 1969). The degree of satisfaction depends upon the continuing process of adjustment on the part of the worker and the work environment. In this sense, research on work adjustment can lead to the understanding of both the concept of job satisfaction and the potential contribution of vocational education to job satisfaction.

The Theory of Work Adjustment states the notion that work is an interaction between an individual and a work environment in which each has requirements of the other. The work environment requires certain tasks to be performed and the individual brings skills to perform the tasks. The individual, in exchange, requires compensation for work performance and may require such additional conditions as a safe environment, a comfortable place to work, congenial coworkers, a competent supervisor, and an opportunity to achieve. As long as the environment and the individual continue to meet each other's requirements, their interaction is maintained; when the requirements are not met, the individual and/or the environment moves to change or terminate the interaction. The degree to which the requirements of either the worker or the work environment are met is described on a dimension called correspondence.

Two primary indicators of work adjustment are the satisfaction of the individual with the work environment, and the satisfaction of the work environment with the individual, i.e., the individual's satisfactoriness. Both satisfaction and satisfactoriness are required for the individual to remain and be retained on the job. Tenure is another indicator of work adjustment.

The principal characteristics of the individual in relation to work adjustment may collectively be called the individual's work personality. The work personality consists of at least two sets of characteristics: status characteristics (personality structure) and process characteristics (personality style). Personality structure may be described in terms of the individual's skills and needs, or in terms of the reference dimensions for skills (abilities) and for needs (values). Personality style describes the individual's typical ways of interacting with the environment (given a particular personality structure), on such dimensions as: flexibility (tolerance for discorrespondence with the environment before acting to reduce the discorrespondence), activeness (reducing discorrespondence by acting to change the environment), reactiveness (reducing discorrespondence by acting on self to change expression of personality structure), celerity (quickness or slowness in acting to reduce discorrespondence), pace (level of effort typically expended in interaction with the work environment), rhythm (typical patterns of pace), and perseverance (tolerance of discorrespondence with the environment before leaving it).

The work environment may also be described in terms commensurate with those describing work personality. The work-environment structure may be described in terms of skill requirements and need reinforcers (classes of stimulus conditions the presence or absence of which is associated with satisfaction of needs). Work-environment structure may also be described in terms of reference dimensions for skill requirements (ability-requirement patterns) and for need reinforcers (reinforcer clusters).

The style of the work environment may be described in terms of its flexibility (tolerance of worker discorrespondence), activeness (likelihood of acting to change the worker discorrespondence), reactiveness (likelihood of changing its structure to accommodate worker discorrespondence), celerity (speed of action to reduce worker discorrespondence), pace (effort expended to reduce worker discorrespondence, rhythm (typical pattern of pace), and perseverance (tolerance of worker discorrespondence before terminating the worker).

It is important to note that the work-personality structure and style, and work-environment structure and style are described in the same terms and can be assessed on the same dimensions. This makes it possible to (a) match work-personality structure with work-environment structure to determine degree of correspondence for the prediction of work adjustment; and (b) describe the continuous interactive process of work adjustment, thereby enhancing the prediction of work adjustment and the confidence that it will be maintained.

Implications of the Theory of Work Adjustment

On the basis of the concepts presented in the Theory of Work Adjustment, several hypotheses and implications may be drawn about job satisfaction. These hypotheses and implications are stated as follows:

1. Job satisfaction can be predicted from the correspondence between the reinforcer system of a work environment and an individual's needs. This prediction will be more accurate if the worker is satisfactory or competent.

2. When the needs and satisfaction levels of a group of workers in a given occupation are known, it is possible to infer the effective reinforcers and reinforcer pattern for that work environment.

3. When the reinforcer patterns of work environments and the satisfaction levels of established workers in each of the environments are known, it is possible to infer the needs and values of these workers.

4. Knowledge of job satisfaction will improve the prediction of worker satisfactoriness (performance, productivity) from the correspondence

between workers' skills (abilities) and work skill requirements (ability requirements).

5. The probability that a worker will remain in a job can be predicted from the worker's job satisfaction. This prediction can be improved by information about the personality-style characteristics of the worker and the style characteristics of the work environment.

VOCATIONAL EDUCATION, JOB SATISFACTION, AND WORK ADJUSTMENT

A review of the literature in vocational education reveals increasing use of satisfaction as an outcome or evaluation criterion in follow up studies of vocational graduates from secondary and postsecondary level programs (Berkey 1974; Felstehausen and Howell 1971; Francis and Jones 1976; Kingston 1970; Lucas et al. 1975; McLean and Jones 1975; Miller 1974; Perrone 1969; Pucel 1974; Sewell 1974; and Smith et al. 1971). In addition, a number of studies in the field focus on the relationship of job satisfaction to other variables (Kazanas 1978; Kazanas and Gregor 1977; Kutie 1978; Mietus 1978; and Todd 1972). For example, Kazanas (1978) found a positive relationship among the factors of meaning of work, value of work, job satisfaction, and job productivity of vocational education graduates, although the strength of this finding was relatively low. One conclusion drawn was that vocational graduates who perceived work as having intrinsic value may be more satisfied with work and more productive. Kazanas and Gregor (1977), studying job satisfaction and productivity, concluded that vocational educators should be concerned with their students' work values because of the significance of these values for satisfaction and productivity.

There has also been some consideration of the effects of vocational education on job satisfaction. Billings (Gray, Abram, and McKinney 1978) presents four hypotheses about the possible effects of vocational education on job satisfaction, based on Lawler's component model and the job/person fit and met expectations models of job satisfaction. O'Reilly (National Center for Research in Vocational Education 1980) discusses the problems and issues involved in measuring and using satisfaction with training as perceived by former vocational students. Erickson (National Center 1980) also discusses issues involved in assessing student satisfaction with training, which is somewhat related to job satisfaction.

It would appear, on the basis of reviews of both the general literature on job satisfaction and the literature specifically related to vocational education, that knowledge about job satisfaction can be profitably applied to achieving the missions of vocational education.

Questions to be Addressed by Vocational Education

If job satisfaction is to be included as a desired outcome of vocational education, a number of questions should be addressed. These include the following:

1. Which facets of job satisfaction can be more readily influenced by vocational education programs and which may be less amenable to influence?

2. What characteristics of individuals ... important to know because they are useful in predicting likely job satisfaction?

3. How can prospective students choose (or be assisted in choosing) vocational education programs most likely to prepare them for satisfying work careers?

4. Would meeting the goal of worker satisfaction require major revamping of vocational education curricula?

5. Is the training setting similar to the work environment in those aspects likely to be important to worker satisfaction?

6. Can the goal of worker satisfaction be combined harmoniously with the goal of worker competence?

7. Is there a theoretical framework for deriving answers to the above questions and is a technology available to implement such answers?

These questions can best be addressed by the application of an organized theory. One approach, provided by the Theory of Work Adjustment (Lofquist and Dawis 1969), would treat the above questions in the following manner.

In order to specify the facets of job satisfaction amenable to influence in a vocational education setting, it is necessary to develop a taxonomy of the major components of job satisfaction. Research on the Theory of Work Adjustment has produced a list of twenty common components that can be assessed as both work-relevant needs of individuals and individual-relevant need reinforcers of work environments. These twenty components can be organized into six value groups for individuals and six reinforcer clusters for jobs. The twenty need-reinforcer components (with their defining statements) grouped as six values, are the following.

Achievement

Ability Utilization (I could do something that makes use of my abilities.)

Achievement (The job could give me a feeling of accomplishment.)

Comfort

Activity (I could be busy all the time.)

Independence (I could work alone on the job.)

Variety (I could do something different every day.)

Compensation (My pay would compare well with that of other workers.)

Security (The job would provide for steady employment.)

Working Conditions (The job would have good working conditions.)

Altruism

Co-workers (My co-workers would be easy to make friends with.)

Moral Values (I could do the work without feeling it is morally wrong.)

Social Service (I could do things for other people.)

Status

Advancement (The job would provide the opportunity for advancement.)

Recognition (I could get recognition for the work I do.)

Authority (I could tell people what to do.)

Social Status (I could be "somebody" in the community.)

Safety

Company Policies and Practices (The company would administer its policies fairly.)

Supervision-Human Relations (My boss would back up the workers with top management.)

Supervision-Technical (My boss would train the workers well.)

Autonomy

Creativity (I could try out some of my own ideas.)

Responsibility (I could make decisions on my own.)

These six values can be further grouped into the following three major classes:

- Environmental—Comfort, Safety

- Social—Altruism, Status
- Self—Achievement, Autonomy

The Environmental facets of satisfaction are, as a group, most susceptible to manipulation in the training setting, and the Social and Self components are more difficult to influence. All should be subject to influence, with some requiring more ingenuity. For example, it is relatively easy to structure Activity and Variety by developing appropriate work schedules; to influence Independence by the location of work stations; and to influence Supervision by adopting good supervisory practices, i.e., practices that communicate to the workers (students) directly and regularly the technical and human relations competencies of the supervisors (instructors). On the other hand, Ability Utilization would require the instructor to attend to individual differences in ability levels and patterns of students and to individualize instruction to the greatest extent possible.

In order to influence (promote) satisfaction in a specific vocational education training program, it is necessary to determine the reinforcer system that operates in the actual work environment, and then to simulate that system in the training environment. Just as the objective of skill training is to develop skills that will meet the skill requirements of the actual work environment, the objective of influencing satisfaction in the training setting is to facilitate the transfer of satisfaction experienced in training to the actual work environment. This objective can best be achieved by ensuring the correspondence and continuity of the reinforcer systems of both training and actual work environments. Similarity in physical conditions alone (e.g., equipment, machines, tools, materials) is necessary but will not ensure that satisfaction experienced and learned in the training setting will carry over to the work setting. As indicated the facets of satisfaction are broader than those represented by physical conditions alone.

Once the reinforcer system of the actual work environment has been determined, the training environment should be examined to assess how well it corresponds. This assessment may be facilitated by utilizing the three category system whereby the components of job satisfaction are classified according to whether they are Environmental, Social, or Self. This assessment will indicate which components need to be added to (or increased in) the environment and which should be removed (or reduced). Examples of ways in which this might be accomplished for specific components will be discussed later.

According to the Theory of Work Adjustment, the most important characteristics in the prediction of individual satisfaction are needs and values (i.e., preferences for reinforcers) and personality-style characteristics (in particular flexibility, activeness, and reactiveness). Needs and values will determine expectations (demands) of the ideal work and training environments. They also will provide information to instructors (and later to employers) about

the kinds of reinforcers that will facilitate satisfaction. Flexibility, activeness, and reactiveness are important in determining ease of difficulty in achieving the level of correspondence with the environment that will result in satisfaction. The importance of these characteristics to satisfaction depends on the individual's ability to perform satisfactorily.

Ideally, vocational education institutions should train both for competence and to facilitate total work adjustment (satisfaction as well as satisfactoriness). Given these goals, students should learn about themselves (i.e., their work personalities) and about the world of work (its demands and rewards) so that their choices of training programs and of work are realistic. This might be accomplished by the establishment of an institutional vocational assessment program. Such a program would have as its major functions the assessment and communication, to prospective students, of their individual (unique) work-personality characteristics; the characteristics of each occupation for which training is offered; the prospects of success and satisfaction in these occupations; and the process by which work adjustment is maintained.

Meeting the goal of worker satisfaction would not require major revamping or restructuring of vocational education curricula. The focus would be on further enrichment of existing curricula. Such enrichment would have the specific objective of facilitating satisfaction with both the immediate training environment and, ultimately, the work environment, and would be keyed to the reinforcers in the work environment. Some facets in the training environment might have to be modified, eliminated, or added to ensure the fidelity of the training environment and to shape the configuration of the facets to ensure their accurate perception by students.

Training settings are not likely to be very similar to their target work environments in regard to worker satisfaction, unless this has been a specific goal and a careful analysis of the similarity of the reinforcer systems has been undertaken. The literature indicates that such analysis is rare even for work environments.

The goals of worker satisfaction and worker competence should not be in conflict. While the literature does not indicate a high relationship between satisfaction and productivity, it does show that satisfaction lessens the likelihood of turnover, absenteeism, tardiness, and related problems. Furthermore, if the Theory of Work Adjustment is valid, satisfaction should improve the accuracy in predicting satisfactoriness from the correspondence between the student's competence (skills, abilities) and the task requirements of the job. Training for competency should remain the main goal, but satisfaction is also a desirable goal if competency is to transfer maximally from the training to the work environment.

The Theory of Work Adjustment provides one foundation for justifying job satisfaction as a desirable goal of vocational education. It can also be implemented using currently available technology.

Applying the Theory of Work Adjustment to Vocational Education

The Theory of Work Adjustment may be put into effect in vocational education in the following ways:

1. Assuming that job satisfaction should be viewed in the total context of work adjustment, it is necessary first to ensure the attainment of worker satisfactoriness. This requires standardization of skill training. Skill-requirement information may be reduced to ability-requirement information. An example of this approach is the U.S. Department of Labor (1970) work in the development of Occupational Aptitude Patterns and the companion tool, the General Aptitude Test Battery, to assess the ability patterns of occupations and individuals respectively. Use of these tools has the advantage of considerable research and development backing. It is, of course, possible to use other instruments that measure a range of vocationally relevant abilities in individual assessment, and to develop the ability-requirement information in the form of occupational norms.

2. It is necessary to measure individuals' needs and values, and to describe occupations in need-reinforcer terms. This can be achieved by using the Minnesota Importance Questionnaire (Gay et al. 1971) to measure needs and values, and by using the companion Minnesota Job Description Questionnaire (MJDQ) (Borgen, Weiss, Tinsley, Dawis, and Lofquist 1968) to develop Occupational Reinforcer Patterns (ORPs, descriptions of the target work environments in terms of need-reinforcer systems). Occupational Reinforcer Patterns are currently available for 181 benchmark occupations. Other instruments that measure needs and values may be utilized, and the reinforcer characteristics of the target occupations could be described in normative terms.

3. Vocational training programs are usually structured to reflect the skill and competency requirements of the target work environment. These skill requirements, however, are not frequently translated into specific ability-requirement terms. This can readily be done by measuring the abilities of students and determining (by multivariate methods) the relationship of these abilities to skillfulness (i.e., attainment of required competency levels).

4. As a first step in approximating the reinforcer characteristics of a target work environment, the MJDQ may be used to describe the reinforcer system of the training environment. Instructors or advanced students can be used to complete MJDQs to obtain the perceived reinforcer pattern. This pattern can then be compared with the target ORP to determine similarities and differences.

5. Where differences are perceived between the training-setting reinforcer pattern and the target ORP, careful study will be required to determine the basis for such differences. For those training-environment reinforcers that are discrepant, it may be profitable to study their analogs in the work environment to discover ways in which modifications may be made in the training environment reinforcer system. Some of these modifications may become obvious with

minimal study of the work environment. For example, if a training environment reinforces such needs as those for Creativity (trying out new ideas) and Responsibility (making own decisions), but the target work environment requires adherence to both prescribed procedures and supervisory orders, it is obvious that the target environment will not reinforce these needs, and that the training environment will require some modifications.

6. The following are some examples of ways in which need-reinforcer components in training environments might be changed to simulate more closely the pattern of the actual reinforcer system in the target work environment.

ENVIRONMENTAL (COMFORT, SAFETY) REINFORCERS

Add or Increase Reinforcers	*Delete or Decrease Reinforcers*
Structure training and work activities to yield a steady, continuing, paced, and predictable schedule.	Introduce non-predictable and variably applied periods of inactivity.
Arrange work stations to maximize students' working alone.	Arrange work stations to maximize physical proximity of students.
Require that projects be completed by each student independently.	Assign projects for completion by groups of students.
Increase number and variety of projects and schedule to avoid continuous work on the same problem.	Standardize training projects so that they remain essentially the same from day to day.
Grade all projects on an objective, automatic basis that is clearly understood beforehand by all students.	Allow more individualized bases for grading that are keyed more to individuals' progress than to an objective normative standard.
Regularly provide current information on employment opportunities and earnings for the target occupation.	Focus only on immediate training objectives and not on employment.
Provide for the best maintenance of equipment and the work environment.	Use funds and time allocated for maintenance to increase practice opportunity in skill training.

SOCIAL (ALTRUISM, STATUS) REINFORCERS

Add or Increase Reinforcers	*Delete or Decrease Reinforcers*
Assign students to work groups and stations on the basis of sociograms.	Make random assignments to work groups and stations.
Emphasize the right-versus-wrong aspects of procedures, services, and dealings with others following high standards of behavior.	Focus more on getting results than on standards of behavior.

Call attention frequently to the ways in which the training will result in helping other people.	Focus primarily on self accomplishment and the achievement of skillfulness.
Establish a hierarchical system of progression through well-defined levels of accomplishment which is recognized by use of appropriate titles and insignia.	Avoid recognizing differential accomplishment and foster a more egalitarian climate.
Provide for student experience in overseeing the carrying out of projects by other students.	Delegate very little authority to students.
Increase the number of student awards given out.	Eliminate any existing student awards systems.

SELF (ACHIEVEMENT, AUTONOMY) REINFORCERS

Add or Increase Reinforcers	*Delete or Decrease Reinforcers*
Seek to match difficulty levels of tasks/projects to individual student ability levels.	Standardize task-difficulty levels and task progression for all students.
Teach students to recognize their levels of accomplishment by comparisons with objective standards/models of competency.	Rely solely on global or overall instructor evaluation of students' progress.
Build in procedures that encourage student experimentation with techniques, approaches, designs, and choice of objectives.	Use highly prescribed standard approaches to problem solving and project completion.
Allow for a wide latitude of student choice in selecting, scheduling, and completing projects.	Operate on a fixed schedule of projects to be completed at prescribed times.

7. When modification of the reinforcer system in the training environment is contemplated, evaluation studies should also be planned. This will entail taking readings of student satisfaction in the prechange training environments and in the target work environment entered by that group of students, to establish a baseline for comparison with readings of satisfaction for a postchange group of students. It will also be necessary to obtain data on the characteristics of the two student groups to ascertain their comparability on other variables that might influence satisfaction. One objective of such studies is to determine whether or not students trained in different environments show different levels of satisfaction. Another is whether or not such differences transfer to the target work environments.

8. Pre-post evaluation studies should also be planned to include data on competency (skill) levels for both groups in both their respective training and target-work environments. The interest here is in determining whether or not

changes in the reinforcer system of the training environment affect levels of competency (skill) attained in the training environment and the transfer of competency to the target work environment.

9. While the evaluation studies described address the effectiveness of an approach to facilitating job satisfaction, they speak only to results obtained at a given point of time. Since jobs, training settings, and student groups change over time, a continuing systemwide evaluation procedure should be established to monitor effectiveness and suggest additional changes. Data from a well-designed, continuing follow-up procedure will also provide valuable information for use in working with prospective students, e.g., information on the likelihood of finding employment, being satisfied, and achieving overall work adjustment.

10. A vocational assessment program for prospective students would greatly assist students in choosing vocational education programs most likely to result in successful completion of training and in satisfying careers. Such an assessment program would have as its main goals: the assessment and communication to the student of work personality characteristics (skills, abilities, needs, values, style); communication of the characteristics of training and work environments as they relate to the work personality; provision of information on the likelihood of adjustment in specific training and work environments; and the teaching of the process of adjusting to work. Data from a well-designed, continuing follow-up procedure will contribute greatly to the effectiveness of the vocational assessment program.

The needs of special groups such as minorities, women, the handicapped, or the aging, have not been addressed specifically in this analysis, although the concepts and procedures should be applicable. More research must be done to confirm this notion, however. The focus should be on the individual rather than on the group because, within any group, the range of individual differences is extremely large and overshadows differences between groups.

Given the importance of career choice to individual well-being and identity, and to the success of vocational education programs, it follows that students should be knowledgeable about their individualized work-personality characteristics, the characteristics of work (and training) environments, the likelihood of their adjustment to work (and training) in specific work environments, and the process of continued adjustment to work. Such knowledge, leading to the most meaningful student choices for target careers, can be generated and communicated in systemwide vocational assessment.

SUMMARY

Extensive literature exists on job satisfaction, work adjustment, and their relationship to vocational education.

The major points are as follows:

- The occupation is a primary determiner of an individual's economic status, social status, self-identity, and overall life satisfaction.
- Both societal need for well-trained workers and concern for the worker as an individual are recognized in the development of vocational education and guidance programs. In recent years more attention has been given work satisfaction, while worker satisfactoriness remains a primary goal.
- Satisfaction can be measured reliably.
- There are substantial numbers of minimally satisfied and dissatisfied workers.
- While satisfaction does not guarantee performance (satisfactoriness), it does relate to turnover, tenure, absenteeism, and tardiness. It should also enhance satisfactoriness.
- Several theories of satisfaction, and of satisfaction in the broader context of adjustment to work, complement each other and provide bases for measuring and predicting satisfaction and the enrichment of work environments.
- Vocational educators are interested in satisfaction as an outcome variable of vocational education programs and in the facilitation of satisfaction by enriching training environments.
- It seems reasonable to assume that training environments that simulate the reinforcer systems of their target work environments might provide conditions that will facilitate satisfaction with training, and might also facilitate the transfer of both satisfaction and satisfactoriness to target work settings.
- The Theory of Work Adjustment (work is the interaction between an individual and a work environment in which each has requirements of the other) provides one approach that should be generalizable to

vocational education training programs. It has been made operational and can be applied.

- If a Theory of Work Adjustment approach, or some other theory-based approach, is taken to facilitate satisfaction and its transfer to work environments, pre-post research and continuing follow-up studies should be carried out.

Given the importance of career choice to individual well-being and identity, and to the success of vocational education programs, it follows that students should be knowledgeable about their individualized work-personality characteristics, the characteristics of work (and training) environments, the likelihood of their adjustment to work (and training) in specific work environments, and the process of continued adjustment to work. Such knowledge, leading to the most meaningful student choices for target careers, can be generated and communicated in systemwide vocational assessment.

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